



RESOLUTION AWARDING AN 18-MONTH PROFESSIONAL SERVICES CONTRACT TO GOLDEN STATE BRIDGE/OBAYASHI JOINT VENTURE IN AN AMOUNT NOT TO EXCEED \$675,000 FOR CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRECONSTRUCTION SERVICES FOR THE YERBA BUENA ISLAND WESTSIDE BRIDGES SEISMIC RETROFIT PROJECT, AND INCREASING THE AMOUNT OF THE PROFESSIONAL SERVICES CONTRACT WITH WMH CORPORATION BY \$4,000,000, TO A TOTAL AMOUNT NOT TO EXCEED \$15,300,000, TO COMPLETE FINAL PLANS, SPECIFICATIONS AND ESTIMATES FOR THE YERBA BUENA ISLAND BRIDGE STRUCTURES PROJECT, AND AUTHORIZING THE EXECUTIVE DIRECTOR TO NEGOTIATE AND MODIFY NON-MATERIAL CONTRACT PAYMENT TERMS AND NON-MATERIAL CONTRACT TERMS AND CONDITIONS

WHEREAS, The Transportation Authority is working jointly with the Treasure Island Development Authority (TIDA) on the development of the I-80/Yerba Buena Island (YBI) Interchange Improvement Project; and

WHEREAS, The scope of the YBI Interchange Improvements Project includes two major components: 1) the YBI Ramps Improvement Project, which includes constructing new westbound on and off ramps Phase 1 (on the east side of YBI) to the new Eastern Span of the San Francisco-Oakland Bay Bridge and the YBI Ramps Southgate Road Realignment Improvements Phase 2; and 2) the YBI Westside Bridges Seismic Retrofit Project (Project) on the west side of the island; and

WHEREAS, The Project will reconstruct or seismic retrofit eight existing bridge structures and will be challenging to implement given its unique location along the western edge of YBI along steep terrain on the hillside overlooking the San Francisco Bay; and

WHEREAS, Construction of the YBI Westside Bridges Project is scheduled to begin in late



spring or early summer 2020 and be completed by summer/fall 2021; and

WHEREAS, In addition to the challenging location, the Project presents numerous complex structural (bridge/retaining wall foundations) and geotechnical challenges (unstable soils), as well as difficult construction access (very steep terrain) and environmental constraints (construction adjacent to and above the San Francisco Bay); and

WHEREAS, Given the Project's challenges, the Transportation Authority received state legislative authorization to use the Construction Manager/General Contractor (CM/GC) project delivery method through Assembly Bill 2734 and Transportation Authority Board approval through Resolution 18-42 in March 2018; and

WHEREAS, On July 10, 2018, the Transportation Authority issued a Request for Qualifications (RFQ) for CM/GC services for the Project; and

WHEREAS, The Transportation Authority received six statements of qualifications (SOQs) in response to the RFQ by the due date of August 10, 2018; and

WHEREAS, An evaluation committee comprised of staff from the Transportation Authority, TIDA, United States Coast Guard, Contra Costa Transportation Authority and Caltrain staff evaluation the SOQs and interviewed all six firms between August 28-30; and

WHEREAS, Based on the results of this competitive selection process, the evaluation committee recommended award of the professional services contract to the highest-ranked firm of Golden State Bridge/Obayashi Joint Venture; and

WHEREAS, Under the Memorandum of Agreement (MOA) between the Transportation Authority and TIDA for the I-80/YBI Interchange Improvement Project, the Transportation Authority has undertaken the procurement and management of professional consultant services to provide the necessary engineering and environmental services to produce all necessary documents required to prepare the Seismic Strategy Reports, environmental documentation, and design for the



eight YBI Bridge Structures on the west side of the island; and

WHEREAS, On December 14, 2010, through Resolution 11-28, the Transportation Authority awarded a two-year professional services contract to WMH Corporation, in an amount not to exceed \$1,600,000, for engineering and environmental services to produce the necessary documentation to prepare the Seismic Strategy Reports, environmental documentation, and preliminary design for the Project; and

WHEREAS, The scope of work for the WMH Corporation contract was envisioned as a three phase effort, with the option to amend the contract for Phase 2 (environmental) and Phase 3 (final design efforts) based on adequate funding and satisfactory performance; and

WHEREAS, On February 28, 2012, through Resolution 12-34, the Transportation Authority increased the amount of the contract by \$4,300,000 for a total amount not to exceed \$5,900,000 to extend the existing contract through the approval of the Environmental Document and the Plans, Specifications and Estimate (PS&E) phase; and

WHEREAS, On December 16, 2014, through Resolution 15-18, the Transportation Authority increased the contract with WMH Corporation by \$5,400,000, to a total amount of \$11,300,000 to complete preliminary engineering, environmental analysis, and design for the Project; and

WHEREAS, Concurrent with the recommendation to award a contract for the CM/GC preconstruction services, the Transportation Authority is seeking approval to amend the contract with WMH Corporation to complete final PS&E for the Project; and

WHEREAS, The proposed amendment to the contract would increase the existing contract amount by \$4,000,000, to a total amount not to exceed \$15,300,000, and extend the contract through the approval of the additional preliminary engineering and final PS&E phase through April 30, 2020; and

WHEREAS, Under the MOA between TIDA and the Transportation Authority, TIDA will



reimburse the Transportation Authority for all Project costs that are not reimbursed by federal and state funds; and

WHEREAS, Award of both the Golden State Bridge/Obayashi Joint Venture contract and the WMH Corporation contract amendment are subject to Caltrans' approval of an additional \$7 million of federal Highway Bridge Program funds for reimbursement of preliminary engineering, design services and CM/GC costs; and

WHEREAS, This year's activities for both the contract and contract amendment will be included in the Transportation Authority's mid-year budget amendment, and sufficient funds will be included in future fiscal year budgets for the remaining activities; now, therefore, be it

RESOLVED, That the Transportation Authority hereby awards an 18-month professional services contract to Golden State Bridge/Obayashi Joint Venture in an amount not to exceed \$675,000 for CM/GC preconstruction services for the YBI Westside Bridges Seismic Retrofit Project, and increases the amount of the professional services contract with WMH Corporation by \$4,000,000, to a total amount not to exceed \$15,300,000, to complete final PS&E for the Project; and be it further

RESOLVED, That the Executive Director is hereby authorized to negotiate and modify contract payment terms and non-material contract terms and conditions; and be it further

RESOLVED, That for the purposes of this resolution, "non-material" shall mean contract terms and conditions other than provisions related to the overall contract amount, terms of payment, and general scope of services; and be it further

RESOLVED, That notwithstanding the foregoing and any rule or policy of the Transportation Authority to the contrary, the Executive Director is expressly authorized to execute agreements and amendments to agreements that do not cause the total agreement value, as approved herein, to be exceeded and that do not expand the general scope of services.



Attachments (2):

1. Scope of Services for Golden State Bridge/Obayashi Joint Venture Contract
2. Scope of Services for WMH Corporation Contract Amendment



The foregoing Resolution was approved and adopted by the San Francisco County Transportation Authority at a regularly scheduled meeting thereof, this 23rd day of October, 2018, by the following votes:

Ayes: Commissioners Brown, Cohen, Kim, Mandelman, Peskin, Safai, Stefani, Tang and Yee (9)

Absent: Commissioners Fewer and Ronen (2)

Aaron Peskin *11-9-18*

Aaron Peskin

Date

Chairperson

ATTEST:

Tilly Chang *11/10/18*

Tilly Chang

Date

Executive Director

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Scope of Services for GSB/Obayashi JV Contract

I. Description of Services

1.0 Introduction

The Yerba Buena Island (YBI) Westside Bridges Project (Project) encompasses eight (8) existing bridge structures on the west side of YBI. These structures generally comprise a viaduct along Treasure Island Road, just north of the San Francisco-Oakland Bay Bridge (SFOBB). The Project limits along Treasure Island Road are from the SFOBB to approximately 2000-feet northward. This stretch of Treasure Island Road includes the bridge structures and portions of “at-grade” roadway.

The Project is funded through the Federal Highway Bridge Program and the Project purpose is to bring the bridge structures up to current seismic safety standards. To accomplish this, five (5) structures will be seismically retrofitted, and three structures will be demolished and replaced with realigned roadway, an overcrossing structure, and new retaining walls.

As a project team member, the Construction Manager will provide input on schedule, phasing, constructability, materials availability, cost, etc. throughout the development of the project. Construction Manager tasks will include the following.

2.0 Preconstruction Tasks

The Construction Manager’s tasks during the design phase include the following:

2.1 Task 1: Project Team Kickoff Workshop

The Construction Manager shall collaboratively work with the Transportation Authority design team to plan, attend, and actively participate as a member of the Project Team in the Project Team kickoff workshop to be led by the Transportation Authority. The Project Team kickoff workshop may include discussion of the following:

1. Introduction to the Project, the Construction Manager/General Contractor (CMGC) delivery method, the partnering process, and the Project stakeholders
2. Presentation of Project elements and the Project scope
 - a. Project status, goals, objectives, etc.
 - b. Project information, including relevant plans, specifications, studies, and reports
3. Project schedule and major milestones
 - a. Project Team meetings
 - b. Major Project activities
4. Identification of roles and responsibilities for the Project Team
 - a. CMGC Program Team
 - b. Transportation Authority design team
 - c. Transportation Authority estimator
 - d. Independent Cost Estimator (ICE)
5. Process for design input
 - a. Innovation

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- b. Project Engineer's needs
6. Communications protocol and plan
7. Identification of change management process
8. Initial discussions on:
 - a. Cost/pricing development
 - b. Project risks identification

Assumptions: The Project Manager, Project Construction Manager, and Transportation Authority design team and two additional key personnel as appropriate with consultation with the Project Manager shall participate in one (1) Project Team kickoff workshop which will be held at the Transportation Authority's offices and last up to eight hours during the course of one business day.

Deliverable: Participation in meeting.

2.2 Task 2: Initial Approach to Cost Meeting

The Construction Manager shall participate in a meeting with the Transportation Authority design team, Transportation Authority estimator and ICE to establish baseline production rate assumptions and various other input standards for formulation of future cost and schedule estimates. The purpose of this meeting will be to establish like assumptions for construction means and methods as well as to establish the plan to communicate changes in scope, quantity, and phasing between the Construction Manager, the Transportation Authority estimator and the ICE in order to affirm a consistent foundation for estimation. Refer to Task 4 for a more detailed description, definition, and delineation of the information to include as a part of the open-book cost estimates prepared for this Project.

The Construction Manager shall attend and actively participate in this meeting by:

- Directing an open discussion with the Transportation Authority design team, Transportation Authority estimator and the ICE regarding specific assumptions, and
- Discussing cost/pricing development and process for design input, analysis, evaluation, and resolution of the Construction Manager's input into the design and specification development process.

Assumptions: The Transportation Authority design team, Transportation Authority estimator, ICE, and additional key personnel as appropriate with consultation with the Transportation Authority Project Manager shall participate in the one meeting which will be held at the Transportation Authority's offices and last up to 8 hours during the course of one business day.

Deliverable: Document the description and assumptions for the work elements that communicate the open-book estimating practices for the Project, including production rate assumptions.

2.3 Task 3: Partnering

The Construction Manager shall participate in a partnering process among all members of the Transportation Authority design team. The partnering process shall take place during the entire length of this Agreement. A facilitator shall be chosen by the Transportation Authority.

Assumptions: The Construction Manager, Transportation Authority design team, and additional key personnel as appropriate with consultation with the Project Manager shall participate in the two

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(2) partnering meetings. The meetings will be held at Transportation Authority's offices and each will last up to eight hours during the course of one business day.

Deliverable: Participation in meetings. Provide partnering workshop facilitator.

2.4 Task 4: Project Meetings and Document Review

The Construction Manager shall advise, assist, and provide written documentation relative to the following:

DESIGN RELATED

- Validate Transportation Authority/Consultant design
- Assist/input to Transportation Authority/Consultant design
- Design reviews
- Constructability reviews
- Operability reviews
- Staging needs
- Market surveys for design decisions
- Verify/take-off quantities
- Assistance shaping scope of work
- Feasibility studies
- Value engineering and innovation
- Risk identification and mitigation
- Maintenance of traffic
- Environmental commitments/permits

SCHEDULE RELATED

- Schedule risk analysis/control
- Validate agency/consultant schedules
- Prepare and manage project schedules
- Develop sequence of design work
- Construction phasing

ADMINISTRATION RELATED

- 3rd party stakeholder coordination, impact avoidance, and reduction
- Attend public meetings
- Biddability reviews
- Subcontractor bid packaging
- Assist in Right of way (R/W) acquisition/ validation
- Teamwork/partnering meetings/sessions
- Develop Quality and Safety Plan

COST RELATED

- Validate Transportation Authority/Consultant estimates
- Prepare project estimates
- Cost/Benefit engineering reviews
- Early award of critical bid packages
- Value Analysis/Engineering
- Materials selection and cost forecasting
- Cost risk analysis
- Cash flow projections/Cost control

The Construction Manager shall attend, participate in, and provide input in the form of written comments at the following milestone meetings, which may include:

- Initial Design Review Meetings (Design Milestone Meeting #1). Two initial design review meetings will be held at the Transportation Authority's offices.
- Intermediate Design Review Meeting (Design Milestone Meeting #2) and Final Design Review Meeting (Design Milestone Meeting #3).

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- **Risk Identification and Resolution Meetings:** These meetings focus on identifying and documenting Project-specific risk, which includes risk definition, probability of occurrence, potential mitigation strategies (including consideration of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) issues and mitigation strategies with the goal of an improved CEQA and FHWA NEPA documents), magnitude of cost and quantity impacts, and schedule impacts. These meetings shall assign risk ownership and document resolution. Project Manager, Project Construction Manager, the Transportation Authority design team, Transportation Authority estimator, and additional key personnel as appropriate with consultation with the Project Manager shall plan to attend two formal risk analysis meetings.
- **Project Cost Model and Schedule Development Meetings:** These meetings focus on establishing, modifying, and maintaining the production-based cost model so that assumptions, contingency, risk, and approach to the estimate are fully understood by the Transportation Authority design team. The meeting will also focus on developing the construction phase schedule. The Construction Manager shall plan to develop three Opinion of Probable Construction Cost (OPCC) estimates and attend three of corresponding resolution meetings.
- **Specifications Development Workshop:** This meeting focuses on clearly defining the Project- specific work items and their methods of measurement and payment so that the work items are fully understood by the Transportation Authority design team. The Project Manager, Construction Manager, and additional key personnel as appropriate with consultation with the Project Manager shall attend this meeting.
- **Project Development Team Meetings:** This meeting focuses on current project issues and project development tasks. The Project Manager and additional key personnel as appropriate with consultation with the Project Manager shall participate in the meetings. The meetings will be held monthly at the Transportation Authority's offices and each meeting will last up to two hours.

The Construction Manager shall be given assignments and tasks for follow-up during the meetings, as well as a schedule for performing and completing such assignments and tasks. The Construction Manager shall be responsible to timely meet the commitments for response in a format acceptable to the Transportation Authority (e.g., comment and resolution form, redlined drawings, written report, and electronic track changes) and within the time period directed by the Transportation Authority, which, in determining such schedule, shall consider a deliverable's size and complexity. The Transportation Authority design team shall establish these expectations, assignments, and commitments at the Project Team kickoff workshop and shall update and discuss the same regularly and issue additional assignments during Project meetings. Table 1 lists the review response period for the specified document types, measured from receipt by the Construction Manager of the applicable documents.

Table 1: Review Response Periods

Document	Review Response Period
Plans Sets 50 sheets or less	Not to exceed five (5) business days

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Plan Sets 51 sheets or more	Not to exceed fifteen (15) business days
Documents 10 pages or less	Not to exceed forty-eight (48) hours
Documents 10 pages or more	Not to exceed five (5) business days
Verify meeting minutes	Not to exceed twenty-four (24) hours

Deliverable: Providing input and participating in each meeting and following up on assigned tasks from each meeting.

2.5 Task 5: Risk Management

The Construction Manager shall identify, quantify, document, and implement Project and construction risks and risk avoidance, reduction, and mitigation strategies, as well as monitor and provide written input into a Project risk register. The risk register will be maintained by the Transportation Authority. The Construction Manager shall participate in the preparation, modifications, and maintenance of a risk register, and the Construction Manager shall continuously communicate its assumptions regarding impacts to risk as the design progresses.

Assumptions: Project Manager, Project Construction Manager, the Transportation Authority design team, Transportation Authority estimator and additional key personnel as appropriate with consultation with the Project Manager shall plan to attend two formal risk analysis meetings.

The meetings will be held at the Transportation Authority's offices and each will last up to eight hours during the course of one business day.

Deliverable: The Construction Manager shall submit written documentation for the risk register specifying the associated value, savings, and cost of risk avoidance, reduction, and mitigation strategies during each design milestone meeting, at a minimum.

The Construction Manager shall also submit, at the time of the Construction agreed price bid or fixed unit price bid, a report that summarizes the decisions for risk elimination or reduction and associated value of each decision in terms of cost and savings in direct relationship with its bid. Refer to Task 12 herein for further information regarding the Construction agreed price bid and/or the fixed unit price bid.

2.6 Task 6: Innovation Management

The Construction Manager shall develop, propose, and track challenges and quantify benefits of innovations throughout the preconstruction phase, including proposing criteria to evaluate suggestions and select improvements that will offer the most value in terms of cost, schedule, and quality. The Construction Manager shall prepare, modify, and maintain an innovation register, which identifies the person and entity that proposed the idea, the value of the idea (in terms of cost, savings, risk reduction/mitigation, and schedule impact), and which ideas were incorporated by the Transportation Authority design team into the final design and construction documents.

Assumptions: This is assumed to be a continuous process and no separate defined meeting is identified.

Deliverable: The Construction Manager shall submit written documentation for the innovation register of all suggested innovations during each design milestone meeting, at a minimum.

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The Construction Manager shall also submit, at the time of the Construction agreed price bid or fixed unit price bid, a report that summarizes both the innovations considered and the innovations implemented. Refer to Task 12 herein for further information regarding the Construction agreed price bid and/or the fixed unit price bid.

2.7 Task 7: Project Construction Schedule Development

The Construction Manager shall create and update Project preconstruction and construction schedules. The Project Team will work together to create a baseline construction schedule, which will be updated, at a minimum, at design milestones of 90% and final plans or as designated by the Transportation Authority and for scope changes that necessitate changes in schedule.

The Construction Manager shall provide a finalized construction schedule with its Construction agreed price bid or fixed unit price bid, which will be part of the Construction Contract and adhered to by the Construction Manager for the duration of the construction phase.

The schedule shall include each Project phase and identify key milestones and work breakdown structure (WBS) tasks numbers specified by the Transportation Authority, deliverables, and dependencies, along with durations for design, preconstruction, procurement, construction management, and construction work. The Construction Manager shall also identify roles and responsibilities for each item of work represented in the schedule.

Assumptions: Construction Manager, the Transportation Authority design team and additional key personnel as appropriate with consultation with the Transportation Authority shall plan to attend three Construction Schedule Development meetings.

Deliverable: The Construction Manager shall provide a detailed schedule(s) in (1) Microsoft Project or equal for pre-construction and (2) Primavera P6 for Windows or equal for construction, which will be updated, at a minimum, at major design milestones designated by the Transportation Authority as necessary. The schedule shall include a narrative report documenting key critical path elements of the schedule and the critical assumptions and/or decisions that may impact schedule adherence, including construction phasing or sequencing and long-lead items. The Construction Manager shall also include in the report any acceleration opportunities and the cost (or savings) and prerequisites thereof and the extent of the potential acceleration.

2.8 Task 8: Project Construction Cost Estimate Development

The Construction Manager shall develop and provide open-book, production-based construction cost estimates for the Transportation Authority's design team's examination so that assumptions, contingency, risk, and approach to the estimate are fully identified, delineated, and understood by the Transportation Authority design team. Refer to [Section 4](#) for a more detailed description, definition, and delineation of the information to include as a part of the open-book cost estimates prepared for this Project. The construction cost estimate will be updated at the design milestones of 90% and final plans and for scope changes that necessitate changes in cost.

The Construction Manager shall be responsible for verifying the quantities and methods of measurement and payment for all Project work items.

Assumptions: Project Manager and additional key personnel as appropriate with consultation with the Project Manager shall plan to attend three Construction Cost Development meetings.

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Deliverable: The Construction Manager shall provide a construction cost estimate for the Project during each design milestone meeting, at a minimum. The construction estimate shall be provided in two separate formats, one that is consistent with the production-based cost model and one that is consistent with the engineer's estimate (formatted in an Excel spreadsheet with bid item descriptions, quantities, and units). The estimate shall reflect and be consistent with the agreed upon methods and measurements of payment anticipated for each bid item and in accordance with the requirements listed in Section 4. The Construction Manager shall also provide a narrative report documenting the summary of markups, escalation, overhead, profit, and contingency. The report shall document critical assumptions, clarifications, and/or decisions of costing that may impact the fluctuations in pricing adherence and a description of allowances and exclusions. Materials selection and cost forecasting and life cycle cost analysis should also be covered in the report.

The Transportation Authority will review the submitted estimates and identify items not in agreement among the Transportation Authority design team, Transportation Authority estimator, ICE, and the Transportation Authority. The Construction Manager will be required to attend construction estimate review meetings as necessary to discuss assumptions and allocations associated with unit prices not in agreement. The construction schedule submitted under Task 7 shall coincide with the production and phasing assumptions used in the development of these cost estimates.

2.9 Task 9: Development of Subcontracting Plan

The Construction Manager shall develop its subcontracting plan in accordance with all requirements listed below as well as all applicable.

Prior to both (a) soliciting any qualifications, proposals or bids for subcontracts, and (b) submitting a bid for a Construction Contract for the Project or a portion thereof, the Construction Manager shall submit to the Transportation Authority for its review and approval a reasonable procedure for the conduct of the procurement and approval processes applicable to subcontracts. Such procedures shall include times for each step of the qualification and proposal processes, with qualification determinations and selections to be made. The subcontracting plan shall be subject to the approval of the Transportation Authority, in its sole discretion, and adhere to the following:

- The Construction Manager shall recommend a division of the work to facilitate the bidding and award of trade contracts.
- The Construction Manager shall provide for involvement by the Transportation Authority in subcontractor solicitation, bidding, and selection.
- The Construction Manager shall identify work that the Construction Manager proposes to self-perform (which must be no less than 30 % of the work, measured on a dollar value basis) and identify how the Construction Manager will ensure that the pricing of self-performed work will be most advantageous to the Transportation Authority.

The subcontracting plan shall include provisions implementing the following requirements:

1. At the time subcontractor proposals are opened, the Construction Manager shall compile and provide to the Transportation Authority or its authorized representative a list that includes, without limitation, the name and contact information of each subcontractor who submits a timely proposal and the price of the proposal submitted by the subcontractor. The list must be made available to the public upon request.
2. Prior to entering into a subcontract, the Construction Manager shall inform the

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Transportation Authority or its authorized representative which subcontractor has been selected and provide the Transportation Authority with access to the proposals, bids, and the evaluation materials.

3. The Construction Manager shall make available to the public, including, without limitation, each subcontractor who submits a proposal, the final rankings of the subcontractors and shall provide, upon request, an explanation to any subcontractor who is not selected of the reasons why the subcontractor was not selected.
4. If the Construction Manager receives a written protest from a subcontractor proposer no later than three full business days following the Construction Manager's selection of a subcontractor, the Construction Manager shall not execute a contract for that subcontract package without first providing at least two full business days written notice to all proposers of the Construction Manager's intent to execute a contract for the subcontract package. Construction Manager's protest procedures shall be subject to the prior written approval of the Transportation Authority.
5. The Construction Manager shall enter into a subcontract with a subcontractor selected pursuant to the approved subcontracting plan and this Appendix A and shall not have the right to make any substitution of any such subcontractor without written approval of the Transportation Authority.
6. If, prior to award and execution of a Construction Contract, the Transportation Authority objects to the use of a subcontractor for subcontracted work on such Construction Contract and such subcontractor has been properly selected by the Construction Manager in accordance with the requirements of the approved subcontracting plan and this Appendix A, the Transportation Authority shall issue a written request to the Construction Manager to change the subcontractor and shall pay any actual and direct increase in the Construction Manager's costs, including an adjustment to the Construction agreed upon price or fixed unit price resulting from the change. The increase shall be based solely on, and be limited to, the direct cost differential between the initial subcontract cost of the original subcontractor and the initial subcontract cost of the changed subcontractor and shall exclude any additional mark- up, profit, and overhead by the Construction Manager. Other than providing such compensation, if any, the Transportation Authority shall have no further responsibilities, liabilities, or obligations arising out of such objection and change of subcontractors. Replacement of subcontractors after award and execution of the Construction Contract, including, without limitation, in connection with unsatisfactory performance, shall be governed by the terms of the Construction Contract.

Deliverable: The Construction Manager shall provide a subcontracting plan no later than 30 calendar days after 90% design review.

The Construction Manager shall update this plan as of the final design milestone and submit an approved final subcontracting plan prior to its submittal of its Construction agreed price bid or fixed unit price bid. All documentation necessary to support adherence to the requirements of shall be included in the subcontracting plan update. If the Transportation Authority elects to consider a Construction Contract for only a portion of the Project, the subcontracting plan must be submitted and approved prior to submittal of any Construction agreed price bid or fixed unit price bid related thereto.

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2.10 Task 10: Development of Disadvantaged Business Enterprise (DBE) Goal Plan

As part of negotiations of the Construction Contract and prior to the award and execution thereof, the Construction Manager shall work with the Transportation Authority to finalize a DBE performance plan to apply during the Construction Contract and for accomplishment of all construction. The DBE performance plan shall address the manner in which the Construction Manager shall seek to meet the DBE goals and requirements, as well as address monitoring and reporting requirements. The DBE performance plan shall be subject to the approval of the Transportation Authority in its sole discretion.

Deliverable: The Construction Manager shall provide a DBE performance plan no later than 30 calendar days after 90% design review. The Construction Manager shall update this plan as of the final design milestone and submit the final DBE performance plan prior to submittal of its Construction agreed price bid or fixed unit price bid. If the Transportation Authority elects to consider a Construction Contract for a portion of the Project, the DBE performance plan must be submitted and approved prior to submittal of any Construction agreed price bid or fixed unit price bid related thereto.

2.11 Task 11: Preconstruction Field Work (as applicable)

The preconstruction field work, if any, shall be at the direction of the Transportation Authority, in its sole discretion, and may include, without limitation, design and/or Project-related activities, such as:

- Utility Relocation Potholing
- Preliminary soil and geotechnical studies Right of Way Demolition Preliminary Survey
- Installation of best management practices (BMP) Public outreach
- Other design-related activities Preconstruction Environmental Surveys Hazardous Waste Remediation
- Monument Preservation, Location and Record of Survey

All such activities shall be consistent with the NEPA and CEQA processes.

2.12 Task 12: Construction Agreed Price Bid(s) or Fixed Unit Price Bid

At the time that the Transportation Authority determines that the design for the Project or any portion thereof has been sufficiently finalized to a level sufficient to determine the provable cost of that portion and provided that (i) the other conditions set forth in this Agreement, including, without limitation, those set forth in Section 39 of this Agreement, and (ii) Tasks 1 through 10 above have been satisfied, as determined by the Transportation Authority, the Construction Manager shall prepare and submit a bid as a cost of the work with an agreed price bid (Construction bid) or as a fixed unit price.

The Construction bid or fixed unit price bid for a Construction Contract for the Project may be for the Project as a whole or the Construction Manager may be asked to prepare a Construction agreed price bid or fixed unit price bid for construction of a portion of the Project, if the Transportation Authority, in its sole discretion, determines significant construction time, money, risk, or potential delay can be reduced by allowing the Construction Manager to start initial work prior to the completion of the overall Project final design package. A Construction Contract for a portion of the

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Project may also include early procurement of long-lead items that may be in short supply or require longer than desired lead times from purchase to delivery.

In both instances, the Construction agreed price bid or fixed unit price bid for a Construction Contract shall be developed and evaluated in accordance with the following process:

- The Transportation Authority shall produce a set of plans and specifications for performance of the construction work.
- The Transportation Authority will evaluate the Construction Contract bid documents for DBE participation opportunities to ensure compliance with the established DBE goal prior to submittal of the Construction agreed price bid or fixed unit price bid. This goal shall be incorporated into the Construction Contract bid documents, the Construction agreed price bid or fixed unit price bid, and the Construction Manager's subcontracting plan. No Construction Contract may be entered into and no Construction agreed price bid or fixed unit price bid may be submitted by Construction Manager until (i) the Transportation Authority has approved the Construction Manager's subcontracting plan; and (ii) the Transportation Authority has approved the Construction Manager's DBE performance plan.
- The Construction Manager will be required to submit commitments from DBE participants sufficient to meet the goal or demonstrate good faith efforts to meet the DBE goal, each as required by this Agreement and in substance satisfactory to the Transportation Authority in its sole discretion.
- The Construction Manager shall submit, with its Construction agreed price bid or fixed unit price bid, a subcontracting plan that has been approved by the Transportation Authority.
- Solicitations for subcontractors and award of subcontracts shall be made pursuant to Public Contract Code 6705, and the Construction Manager's approved subcontracting plan. Concurrently with its Construction agreed price bid or fixed unit price bid, the Construction Manager shall provide a list of all subcontractors that it has procured and intends to use.
- The Construction Manager will prepare and submit a Construction agreed price bid or fixed unit price bid in accordance with the Transportation Authority's bidding requirements under this Agreement. In addition to the scope of work, risk, and quantities, the Construction agreed price bid or fixed unit price bid shall reflect the pricing as defined in the subcontracts and include all information required by the Transportation Authority including applicable DBE commitments as provided herein. The Construction Manager shall include with its Construction agreed price bid or fixed unit price bid a bid bond in such form and amount as directed by the Transportation Authority, along with such other documents and certifications as directed by the Transportation Authority. The form of Construction agreed price bid or fixed unit price bid shall be in such format as the Transportation Authority, in its sole discretion, determines and may include quantity-based items, unit-priced based items, lump sum items, contingency, and allowances.
- The Transportation Authority may have an independent cost estimate prepared. Upon opening the Construction agreed price bid or fixed unit price bid, the Transportation Authority will determine the acceptability of the Construction agreed price bid or fixed unit price bid, in its sole discretion. In assessing the Construction agreed price bid or fixed unit price bid, the Transportation Authority may compare the Construction agreed price bid or fixed unit price bid to some or all of the following: State averages, similar projects, an independent cost estimate, and the engineer's estimate and use such other information that the Transportation

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Authority determines relevant and useful. The Transportation Authority is under no obligation to accept the Construction agreed price or fixed unit price bid, even if it compares favorably to the foregoing data, averages, and estimates.

- The Transportation Authority personnel reviewing the Construction agreed price or fixed unit price bid and other data, averages, and estimates may include the Transportation Authority's Project Manager, Caltrans representatives, FHWA representatives, and other internal Transportation Authority staff and outside advisors deemed necessary or desirable by the Transportation Authority.
- If the Construction agreed price bid or fixed unit price bid is acceptable, the Transportation Authority will prepare a Construction Contract or the work may be added to an existing Construction Contract with Construction Manager by amendment at the sole discretion of the Transportation Authority, if applicable.
- If the Construction agreed price bid or fixed unit price bid is not acceptable, the Transportation Authority may enter into a process of risk identification that identifies price, quantity, assumption and other differences. Following the successful resolution of the risk issues associated with such differences, the Transportation Authority, in its sole discretion, may ask the Construction Manager to re-bid the Construction agreed price or fixed unit price bid for the Project. If this re-bid of the Construction agreed price or fixed unit price bid does not result in a Construction agreed price or a fixed unit price that is acceptable to the Transportation Authority, the Transportation Authority reserves the right, in its sole discretion, to terminate the Construction agreed price or fixed unit price bidding process and undertake such other actions relating to the Project as the Transportation Authority determines, including, without limitation, the right to procure the Construction Contract scope of work by some other delivery method. The Construction Manager is not excused from completion of the Services required under this Agreement, if such Services have not been fully performed.

Deliverable: The Construction Manager shall submit the Construction agreed price bid or fixed unit price bid in accordance with the requirements delineated herein, and utilizing the same production-based cost model as was used in development of the previous OPCCs along with a narrative report documenting critical assumptions and/or decisions of costing that may impact the fluctuations in pricing adherence (on an open-book basis).

3.0 Co-Location Requirements

The Construction Manager shall co-locate key staff with the Transportation Authority design team as needed and requested by the Transportation Authority to facilitate a cooperative project development process, and the regular interaction necessary for the exchange of information during the Preconstruction Phase. It is expected that Key Personnel be co-located with the Transportation Authority at a co-located office determined by the Transportation Authority. Such times, durations, and specific personnel will be mutually agreed upon and are anticipated to include the following:

- One to two-month period during 30% design;
- Ad hoc meetings as necessary at key design deliverables 60%, 90%, Final Submissions; and
- Two to seven days per month to attend Risk Workshops, over-the-shoulder and bimonthly management meetings.

4.0 Open-Book Estimating Requirements

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4.1 Cost Model and Agreed Price Record Documentation Confidentiality

The Construction Manager shall designate information it considers to be confidential. The Construction Manager shall clearly mark each page of documentation that the Construction Manager wants to remain confidential prior to submitting it to the Transportation Authority.

If the Transportation Authority receives a request for the confidential documents under the California Public Records Act, the Transportation Authority will inform the entity requesting the documents of their confidentiality and notify the Construction Manager of the request.

4.2 Cost Model and Cost Estimates

- 1) Within 30 calendar days of the date of the Notice to Proceed, the Construction Manager shall review all available information regarding the design and scope of the project, and based upon that review shall develop a Cost Model for the entire project for review by the Transportation Authority. The cost model shall be prepared in a format agreed upon in advance by the Transportation Authority and the Construction Manager. It will be based on the Transportation Authority's list of standard pay items. The Construction Manager will work with the Transportation Authority to develop the proposed form for the Cost Model and the agreed price and obtain the Transportation Authority's approval of the form or make changes in the proposed form as requested by the Transportation Authority.
- 2) During the review period, the Cost Model will be compared with the estimate prepared by Transportation Authority design team and the Transportation Authority estimator and/or ICE. These estimates will be used to evaluate the Cost Model. The Construction Manager shall make adjustments to the Cost Model if required. Once approved by the Transportation Authority, the Cost Model will be continually updated and kept current as the design progresses throughout the Preconstruction Phase until an agreed price is agreed upon by both the Construction Manager and the Transportation Authority. The Cost Model shall be the best representation of what the complete functional project's construction costs will be. The Cost Model shall not include the Construction Manager's Preconstruction Services fee, sums due to design, the cost of land, right of way, or other costs which are the responsibility of the Transportation Authority. The Construction Manager shall communicate to the Project Team any assumptions made in preparing the Cost Model. The Cost Model may include allowances as agreed to by the Project Team, including:
 - a. allowances for potential additional quantities and/or additional work that the Transportation Authority may require, and
 - b. any costs related to investigations.
- 3) After receipt of the Transportation Authority most current documents from each design milestone, the Construction Manager shall provide a detailed written report to the Project Team regarding the impact of and changes to the Cost Model based on the Construction Manager's review of design documents made available at the design milestone. The Project Manager and the Construction Manager shall reconcile any disagreements on the estimate to arrive at an agreed upon estimate for the construction costs based on the scope of the project through that design milestone. The design milestones applicable to this paragraph are 90% design and final design. If the Project Team requires additional updates of the Cost Model beyond that specified in this paragraph, the Construction Manager shall provide the requested information in a timely manner.

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- 4) If, at any point, the Cost Model submitted to the Transportation Authority exceeds estimates previously agreed upon by the Project Team, or the Transportation Authority's Project Budget, the Construction Manager shall make appropriate recommendations to the Project Manager on means/methods, materials, scope and/or other design elements that it believes will reduce the estimated construction costs, (without altering the Transportation Authority's overall concept) such that it is equal to or less than the established Project Team's target and/or the Project Budget.
- 5) Each Cost Model submitted shall be accompanied by backup documentation which shall include the following:
 - a. Unit prices and quantity take-offs using the Transportation Authority's standard pay items;
 - b. Details of all allowances and unit price work shown and specified in the detailed design documents;
 - c. Material costs, equipment costs, labor costs, General Conditions costs, hourly labor rates, and total cost. Labor costs in the Cost Model shall include employee benefits, payroll taxes and other payroll burdens. The total cost for any portion of the work to be performed by subcontractors shall include subcontractor overhead and profit;
 - d. Production rates, transportation, and other facilities and services necessary for the proper execution of the work, whether temporary or permanent, and whether or not incorporated or to be incorporated into the work;
 - e. All fixed equipment, site improvements, utility and equipment installations;
 - f. Copies of quotations from subcontractors and suppliers;
 - g. Project overhead;
 - h. Allocated general and administrative expenses;
 - i. Bonds, taxes, insurance;
 - j. The Construction Manager's profit; and
 - k. Memoranda, narratives, consultant's reports, and all other information included by the Construction Manager to arrive at the price shown in the Cost Model or agreed price. Include a list of all assumptions and description and breakdown of all allowances.

4.3 Other Requirements

The followings are minimum requirements for the Construction Manager when communicating cost via the open-book estimating process.

- The Construction Manager shall clearly delineate any services to be self-performed and any services to be subcontracted.
 - For self-performed work, overhead and profit percentages are to be identified, agreed upon, and applied to the total self-performed cost "below the line." This is opposed to allocating overhead and profit into individual direct cost items.
 - For work to be subcontracted, the subcontractor's overhead, profit, and indirect costs are to be included within the pricing of that individual direct cost item.

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- Indirect costs are to be scoped, quantified, and priced as a separate division of cost and are not to be allocated under direct costs, except as stated above for work performed by subcontractors.
- Mobilization/demobilization of temporary jobsite offices is to be a detailed item, and the Construction Manager shall include this under indirect costs.
- Mobilization/demobilization of construction equipment is to be an individually detailed item for each piece of equipment, all of which is to be included under direct costs.
- Overhead and profit is to be applied as follows.
 - Overhead is to be priced as a percentage of the total of indirect costs and direct costs.
 - Profit is to be divided and identified into two categories:
 - A percentage applied to self-performed work; and
 - A percentage applied to subcontracts.

The percentage applied to subcontracted costs is to be relatively low compared to the self-performed work.

- After all indirect, contingencies, escalation, overhead, and profit costs have been estimated and individually identified, each cost is to be allocated into pay items to establish the “all in” unit costs. Indirect costs, overhead, and profit are then to be distributed evenly into each pay item. Contingencies shall be specifically identified and allocated depending on risks associated with each pay item.

4.4 Definitions

The following definitions are provided to establish expectations regarding categorization and accounting to be represented in the open-book estimating process for the Project.

- Direct costs (construction) include:
 - Self-performed work based on construction labor (e.g., craft wage rates burdened with fringe benefits only), equipment rental, equipment fuel/maintenance, and purchased materials;
 - Mobilization/demobilization of self-performed construction equipment; and
 - Subcontracted work, including each subcontractor’s direct and indirect costs, overhead, profit, and bonds.
- Indirect costs (construction) include:
 - Field supervision based on bare wages plus salary-related expenses for the project manager, superintendents, project engineer/project controls, and document control/administrator;
 - Jobsite office facilities, temporary utilities, and jobsite vehicles, including mobilization/demobilization of temporary facilities as separately-estimated items;
 - General field labor, clean-up requirements, dumpsters, dump fees, temporary toilets, etc.;
 - Temporary construction facilities or work;
 - Yard support for construction equipment; and

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- Surveys, layout, permits, testing, inspection, and insurance.
- Contingency that is applied to an estimate during the preconstruction phase is based on an assessment of risk at each design phase, and it may be divided into several categories.
 - Design development to cover relatively minor changes in details, specifications, quantities, etc. from early design to 100 percent construction documents.
 - Estimate contingency to cover potential variances from what was estimated for materials and subcontracts compared to what was the actual cost of said materials and subcontracts.
 - Allowances for known items that cannot specifically be quantified and/or priced until further progress in design.
 - Construction phase contingency for variations related to crew productivity, schedule impacts, etc. from what was originally estimated.
- Mobilization/demobilization costs are allocated as follows:
 - Mobilization/demobilization of self-performed construction equipment is considered a direct cost.
 - Mobilization/demobilization of jobsite office trailers, furniture, equipment, and personnel is considered an indirect cost. This also includes temporary utilities and elements required to begin construction, such as permits.
- Overhead is defined as home-office company overhead, including office facilities, management, subsidized insurance programs, paid vacation, etc.

Profit is defined as the operating margin or the dollars remaining after all direct and overhead costs are paid.

- Escalation shall be dealt with as follows:
 - Estimates will be based on wage rates and material costs that are current year at the time of pricing. Cost is added to cover normal expected increases for expenditures beyond the pricing baseline.
 - There are various methods for calculating escalation. The most accurate for labor increases is to manpower-load the construction schedule for all labor types and add agreed upon dollar increases for each calendar period in which each apply.
- Exclusions are defined as items that are associated with the Project but provided by others. This may include items provided by:
 - The Transportation Authority
 - Utility companies
 - Work done by adjacent contractors

5.0 Glossary of Preconstruction Services Terms

5.1 Design-Related Preconstruction Services

- a) **Validate Transportation Authority/consultant design** – Construction Manager evaluates the design as it is originally intended and compares it to the scope of work with both the

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required budget and schedule to determine if the scope can be executed within those constraints. A validated design is one that can be constructed within the budget and schedule constraints of the project.

- b) **Assist/input to Transportation Authority/consultant design** – Construction Manager will offer ideas/cost information to the designer to be evaluated during the design phase. Ultimately, the designer is still responsible for the design.
- c) **Design reviews** – Construction Manager will review plans and documents to identify errors, omissions, ambiguities, and with an eye to improving the constructability and economy of the design submittal.
- d) **Constructability reviews** – Construction Manager will review the capability of the industry to determine if the required level of tools, methods, techniques, and technology are available to permit a competent and qualified Construction Manager to build the project feature in question to the level of quality required by the contract.
- e) **Operability reviews** – Construction Manager will review plans and specifications and provide suggestions that would improve the operations and maintenance of the completed projects as appropriate.
- f) **Staging needs** – Construction Manager will review, validate and/or proposes alternative stage construction concepts for project.
- g) **Market surveys for design decisions** – Construction Manager will furnish designers with alternative materials or equipment along with current pricing data and availability to assist them in making informed design decisions early in the process to reduce the need to change the design late in the process resulting from budget or schedule considerations.
- h) **Verify/take-off quantities** – Construction Manager will verify the quantities generated by the designer for the engineer's estimate.
- i) **Assistance shaping scope of work** – Construction Manager will provide assistance by recommending modifications to scope to ensure that the work conforms to the budget and schedule constraints.
- j) **Feasibility studies** – Construction Manager will investigate the feasibility of possible solutions to resolve design issue on the project.
- k) **Value engineering and innovation** – Construction Manager will recommend innovative solutions to address challenges in design, reduce project costs or better define the project scope.
- l) **Risk Identification and mitigation** – Construction Manager will assist by identifying risks associated with the project and propose response strategies.
- m) **Maintenance of Traffic** – Construction Manager will review, validate and/or propose alternative traffic handling concepts for project
- n) **Environmental Commitments/Permits** – Construction Manager will analyze environmental commitments/Permits attached to Project and determine and/or identify feasibility of commitments/permits. Advise of impacts and alternative solutions to comply.

5.2 Cost-Related Preconstruction Services

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- a) **Validate Transportation Authority/consultant estimates** – Construction Manager will evaluate the estimate as it is originally intended and determine if the scope can be executed within the constraints of the budget.
- b) **Prepare project estimates** – Construction Manager will provide real-time cost information on the project at different points in the design process to ensure that the project stays within budget.
- c) **Cost/Benefit engineering reviews** – Construction Manager shall review cost to include not only the aspects of pricing but also will focus on the aspect that “time equals money” in construction projects.
- d) **Early award of critical bid packages** – Construction Manager will recommend which design packages should be completed first to ensure that pricing can be locked in on the packages.
- e) **Value Analysis/Engineering** – Construction Manager will identify aspects of the design that either do not add value or whose value may be enhanced by changing them in some form or fashion. The change does not necessarily reduce the cost; it may actually decrease the life-cycle costs.
- f) **Material Selection and cost forecasting** – Construction Manager will utilize its contacts within the industry to develop estimates of construction material escalation to assist the owner and designer make decisions regarding material selection and early construction packages.
- g) **Cost risk analysis** – Construction Manager will furnish the agency with information regarding those cost items that have the greatest probability of being exceeded.
- h) **Cash flow projects/cost control** – Construction Manager will conduct earned value analysis to provide the Transportation Authority with information on how project financing must be made available to avoid delaying Project progress. This may also include an estimate of construction carrying costs to aid the Transportation Authority in determining projected cash flow decisions.

5.3 Schedule-Related Preconstruction Services

- a) **Schedule risk analysis/control** – Construction Manager will evaluate the risks inherent to design decisions with regard to the schedule and offers alternative materials, means and/or methods to mitigate those risks.
- b) **Validate agency/consultant schedules** – Construction Manager will evaluate if the current scope of work can be executed within the constraints of the schedule.
- c) **Prepare and manage project schedules** – Construction Manager will prepare schedules throughout the design phase to ensure that dates will be met, and notify the owner when issues arise.
- d) **Develop sequence of design work** – the Construction Manager will recommend the sequences of the design work to mirror the construction work, so that early work packages can be developed.
- e) **Construction phasing** – The Construction Manager will develop a construction phasing plan to facilitate construction progress and ensure maintenance of traffic. This includes identification of critical parcel acquisition and utility relocations.

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5.4 Administrative-Related Preconstruction Services

- a) **Analyze third party agreements/permits/work around** – Construction manager will review agreements, permits and commitments made to third parties and determine and/or identify feasibility of commitment. Advise of impacts and alternative solutions to comply.
- b) **Attend public meetings** – Construction manager may organize and attend public meetings to answer questions from the public about the construction of the project.
- c) **Biddability reviews** – Construction Manager will review the design documents to ensure that subcontractor work packages can be bid out and receive competitive pricing. This action reduces the risk to the subcontractors because they are given the specific design product they need for their bids; not just told to find their work inside the full set of construction documents.
- d) **Subcontractor bid packaging** – Construction Manager will coordinate the design work packaging to directly correlate with subcontractor work packages so that early packages can be easily bid out and awarded.
- e) **Assist in right-of-way acquisition/validation** – Construction Manager will assist the designer in identifying options for right-of-away acquisitions by providing means and methods input. The primary purpose is to minimize the amount of right-of-way actions that must be undertaken and to assist in prioritizing individual parcel acquisition.
- f) **Teamwork/partnering meetings/sessions** – Construction manager will participate in partnering and teamwork meeting as required.
- g) **Develop Quality and Safety Plan** – Construction manager will assist in the development of quality and safety plans and provide recommendations relative to quality control of completed work and any site specific safety issues that required specific attention.

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YBI WEST-SIDE BRIDGES PROJECT

ALTERNATIVE REFINEMENT & FINAL DESIGN
CMGC PROJECT DELIVERY METHOD

INTRODUCTION

This Scope of Services is to provide final design (PS&E) services for the Yerba Buena Island West-Side Bridges Project (Project), located along Treasure Island Road and Hillcrest Road on Yerba Buena Island (YBI), in the City and County of San Francisco. The Project delivery method will be Construction Manager / General Contractor (CMGC). This Scope of Services reflects the changes resulting from CMGC delivery method, as well as previous planning efforts that have altered roadway circulation patterns on Yerba Buena Island (YBI) and incorporated bicycle and pedestrian facilities.

The Project encompasses eight (8) existing bridge structures on the west side of YBI. These structures generally comprise a viaduct along Treasure Island Road, just north of the San Francisco-Oakland Bay Bridge (SFOBB). The Project limits along Treasure Island Road are from the SFOBB to approximately 2000-feet northward. This stretch of Treasure Island Road includes the bridge structures and portions of “at-grade” roadway.

The Project is funded through the Federal Highway Bridge Program and the Project purpose is to bring the bridge structures up to current seismic safety standards. To accomplish this, four structures will be seismically retrofitted, and four structures will be demolished and replaced with realigned roadway, new retaining walls, new undercrossing structure, and one new replacement bridge.

SCOPE OF THE AGREEMENT

PROJECT ELEMENTS TO BE DESIGNED:

Treasure Island Road

- Reconstruct Treasure Island Road in a realigned location towards the uphill side of the slope (to the east).
- Construct new exit gore from realigned Treasure Island Road to the WB I-80 on-ramp, including reconstruction of a portion of the WB I-80 on-ramp between the exit gore and the conform location on the ramp.
- Construct new retaining wall (Retaining Wall #2) at outside edge of realigned Treasure Island Road and the WB I-80 on-ramp, on the downhill side of the slope (west side).
- Construct new retaining Wall (Retaining Wall #4) between realigned Treasure Island Road and the WB I-80 on-ramp.

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Eastbound I-80 Off-Ramp

- Replace the existing EB I-80 off-ramp with a new off-ramp that conforms at the existing SFOBB exit curve, and connects to realigned Treasure Island Road. The off-ramp will cross underneath Treasure Island Road, and tie into Treasure Island Road downstream on the east side (uphill side of the slope)
- Construct new Undercrossing Structure for the EB I-80 off-ramp as it passed underneath Treasure Island Road.
- Construct new “cut” retaining wall (Retaining Wall #1) that will retain the uphill slope next to realigned Treasure Island Road and the EB I-80 off-ramp
- Construct new retaining wall (Retaining Wall #3) between realigned Treasure Island Road and the EB I-80 off-ramp where profile grades are different
- Construct new retaining wall (Retaining Wall #4) at south end of undercrossing crossing structure

Westbound I-80 On-Ramp - Bridge No. 01CA0001 (Structure #1)

- Seismic retrofit of Structure #1.
- Reconstruct bent(s). One or two bents will be reconstructed to provide additional horizontal clearance for trucks traveling on the EB I-80 off-ramp below.

Bridge No. 01CA0002 (Structure #2)

- Demolish Structure #2. The structure has nine spans with an overall length of 580-feet.

Bridge No. 01CA0003 (Structure #3)

- Demolish Structure #3. The structure has twelve spans and is 252-feet long.

Bridge No. 01CA0004 (Structure #4)

- Demolish Structure #4.
- Construct new replacement bridge.

Bridge No. 01CA0006 (Structure #6)

- Demolish Structure #6. The structure has five spans and is 122-feet long.

Bridge No. 01CA0007A (Structure #7A)

- Seismic retrofit of Structure #7A

Bridge No. 01CA0007B (Structure #7B)

- Seismic retrofit of Structure #7B

Bridge No. 01CA0008 (Structure #8)

- Seismic retrofit of Structure #8

Services to be performed include:

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- TASK 1 Project Management
- TASK 2 30% PS&E and Reports
- TASK 3 60% PS&E
- TASK 4 90% PS&E
- TASK 5 100% PS&E
- TASK 6 Right of Way Certification

SCHEDULE

The project schedule milestone dates are as follows:

- Notice to Proceed October 24, 2018
- PS&E Completion April 2020
- Begin Construction May 2020

1.0 TASK 1. PROJECT MANAGEMENT

CONSULTANT, under this Agreement, shall provide project management services.

Management activities shall consist of administration, budget and schedule control, coordination, attending meetings and quality control as follows:

1.1 Project Management / Administration

1.2 Budget and Schedule Control

1.3 Agency / Subconsultant Coordination

CONSULTANT will perform coordination with agencies and subconsultants as required for project development. Coordinate planning and design effort with team members.

1.4 Meetings

1.5 Invoices / Progress Reports

1.6 Quality Assurance / Quality Control

CONSULTANT shall prepare and maintain a project specific Quality Assurance/Quality Control (QA/QC) Plan for design activities, perform in-house quality control reviews for each task, and submit PS&E Design deliverables for review in accordance with the approved schedule.

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2.0 **TASK 2 30% PS&E and Reports**

This Task involves the effort necessary for preparation of 30% design level plans and quantities, as well as required reports and activities.

This task consists of performing additional field survey, preparing the DTM, geotechnical analysis, project geometry including plan sheets and quantities, preliminary structures design, drainage report, hazardous materials report, stormwater control plan, initial TCE requirements, structures aesthetic concept, preliminary landscape concept and biological surveys. CONSULTANT activities are comprised of the following:

- 2.1 Data Collection and Review
- 2.2 Encroachment and Access Permits
- 2.3 Topographic Surveys
- 2.4 Base Mapping and DTM
- 2.5 Develop Roadway Geometrics
- 2.6 Layout Sheets
- 2.7 Profile and Superlevation Sheets
- 2.8 Typical Cross-Sections
- 2.9 Preliminary Pavement Delineation
- 2.10 Preliminary Drainage
- 2.11 Preliminary Foundation Report
- 2.12 Design Cross-Sections
- 2.13 Utility Coordination
- 2.14 Pavement Materials Memorandum
- 2.15 Replacement Planting Conceptual Plan
- 2.16 Structures Aesthetic Treatment Concept Plan
- 2.17 Preliminary Structural Analysis - 35% Design
- 2.18 Traffic Analysis
- 2.19 Exceptions to Design Standards
- 2.20 Right of Way Requirements (TCE)
- 2.21 Preliminary Engineers Estimate
- 2.22 Foundation Report
- 2.23 Hydraulic and Hydrology (Drainage) Report
- 2.24 Hazardous Materials
- 2.25 Stormwater Control Plan
- 2.26 Transportation Management Plan (TMP)
- 2.27 Survey for Roosting Bats
- 2.28 Nesting Bird Habitat
- 2.29 Tree Survey
- 2.30 Dune Gilia Survey

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3.0 TASK 3 60% PS&E

Task 3 consists of preparation of 60% Plans, Specifications, and Estimate for the YBI Westside Bridges Project. This task involves the effort associated with preparing: 60% structural plans; draft 60% roadway plan sheets; unedited technical provisions; and an engineer's estimate.

- 3.1 Respond to Agency Comments from 30% PS&E Submittal
CONSULTANT shall incorporate agreed-upon comments from Caltrans, City (SFDPW and SFMTA), TIDA, and SFCTA into PS&E. A comment-response matrix will be prepared that tracks all written comments and responses for each agency that submits comments.
- 3.2 Utility Coordination
CONSULTANT (AR/WS and WMH) shall coordinate with the City and SFPUC.
- 3.3 60% Roadway and Structural Plan Sheets
CONSULTANT shall prepare 60% level plan sheets.
- 3.4 Special (Technical) Provisions
CONSULTANT shall prepare draft technical provisions (in MS Word format) for bid items. SSP's shall be prepared generally consistent with Caltrans 2015 format standards.
- 3.5 Construction Quantities and Engineer's Estimate
CONSULTANT shall prepare quantities for the CMGC contractor evaluation. CONSULTANT will also prepare an engineer's estimate. Unit prices will be based upon Caltrans Contract Cost Data information and recent relevant projects.
- 3.6 Finalize Exceptions to Design Standards (Fact Sheets)
The CONSULTANT shall obtain final approval from CCSF for non-standard project geometric features.
- 3.7 Permit Applications
CONSULTANT shall prepare permit applications on behalf of SFCTA as necessary for RWQCB, BCDC and other relevant agencies. CONSULTANT shall coordinate with permitting agencies to ensure complete permit application packages are submitted and that they are consistent with stated agency requirements.
- 3.8 Prepare and Submit 65% PS&E Package
CONSULTANT shall prepare 65% PS&E packages. PS&E packages will be provided to SFCTA, CCSF, and Caltrans for review. CONSULTANT anticipates hard copy submittals.

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4.0 TASK 4 90% PS&E

Task 4 consists of preparation of 90% Plans, Specifications, and Estimates for the YBI Westside Bridges Project. This task involves the effort associated with preparing: final technical reports; independent check of structural plans; 90% checked structural plans; 90% roadway plan sheets; edited technical provisions; and an updated individual engineer's estimate.

- 4.1 Respond to Agency Comments from 60% PS&E Submittal
CONSULTANT shall incorporate agreed-upon comments from Caltrans, City SFDPW and SFMTA), TIDA, and SFCTA into PS&E. A comment-response matrix will be prepared that tracks all written comments and responses for each agency that submits comments.
- 4.2 Utility Coordination
CONSULTANT shall continue coordination with SFPUC and TIDA for their proposed utility facilities that may impact the YBI West-Side Bridges project. CONSULTANT will coordinate electrical connection points for new roadway lighting and sign illumination.
- 4.3 Prepare 90% Roadway and Structural Plan Sheets
CONSULTANT shall prepare 90% level plan sheets that incorporate agency review comments from 60% submittal. Roadway plan sheets will be a complete set that includes all plan sheets listed in the 60% Plan Sheet Table.
- 4.4 Special (Technical) Provisions
CONSULTANT shall incorporate agency review comments and prepare 100% edited technical special provisions (in MS Word format) for bid items. SSP's shall be prepared generally consistent with Caltrans 2010 format standards.
- 4.5 Construction Quantities and Engineer's Estimate
CONSULTANT shall prepare an engineer's estimate for each of the eight individual bridge projects. Unit prices will be based upon Caltrans Contract Cost Data information and recent relevant projects. Six individual bid schedules will be prepared.
- 4.6 Finalize Exceptions to Design Standards (Fact Sheets)
The CONSULTANT shall incorporate agency review comments, update the documents, and obtain final approval from CCSF for non-standard project geometric features.
- 4.7 Prepare and Submit 100% PS&E Package

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CONSULTANT shall prepare 100% PS&E packages. PS&E packages will be provided to SFCTA, CCSF, and Caltrans for review. CONSULTANT anticipates hard copy submittals.

5.0 TASK 5. 100% PS&E

Task 5 consists of preparation of 100% Plans, Specifications, and Estimates for the YBI Westside Bridges Project. Agency and CMGC contractor comments from review of the 90% PS&E submittal will be incorporated. This package will be the final plan set. This task assumes the CMGC contractor will be awarded the contract to construct the Project. Therefore no bid support is included. This task involves the effort associated with preparing: 100% structural plans; 100% roadway plan sheets; 100% edited technical provisions; 100% engineer's quantities, and RE File.

- 5.1 Respond to Agency Comments from 90% PS&E Submittal
CONSULTANT shall incorporate agreed-upon comments from Caltrans, City (SFDPW and SFMTA) and SFCTA into PS&E. A comment-response matrix will be prepared that tracks all written comments and responses for each agency that submits comments.
- 5.2 Prepare Final Plan Sheets
CONSULTANT shall prepare 100% plan sheets. Plans will incorporate agreed-upon comments from agency review of the 90% plan submittal including constructability and bid-ability review comments from SFCTA's construction management team.
- 5.3 Prepare Final Technical Special Provisions
CONSULTANT shall prepare 100% Technical Special provisions. SSPs shall include agreed-upon comments from agency review of the 90% plan submittal.
- 5.4 Prepare Final Engineer's Quantities
CONSULTANT shall prepare Final Engineer's Quantities. Quantities will incorporate agreed-upon comments from agency review of the 100% plan submittal.
- 5.5 Prepare and Submit Final 100% Package
CONSULTANT shall prepare 100% PS&E packages. PS&E packages will be provided to SFCTA, City, and Caltrans for review. CONSULTANT anticipates hard copy submittals.
- 5.6 RE File
CONSULTANT shall prepare RE file that includes Survey file, earthwork cross-sections, slope staking notes, and other pertinent information.

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6.0 TASK 6. RIGHT OF WAY CERTIFICATION

Task 6 consists of effort necessary to obtain the agency permits, utility agreements, right of way certification, and construction funding to enable the project to be "Ready to List".

6.1 Obtain Agency Permits

CONSULTANT shall coordinate, prepare exhibits, adapt the project design, attend meetings and make presentations as necessary.

6.2 Right of Way Certification

CONSULTANT (AR/WS) shall coordinate the effort necessary to obtain right of way certification. This Task includes project documentation of the Temporary Construction Easement from TIDA and utility agreements.

6.3 Construction Funding

CONSULTANT shall coordinate with Caltrans and SFCTA to obtain E-76 Approval and project funding for the project.